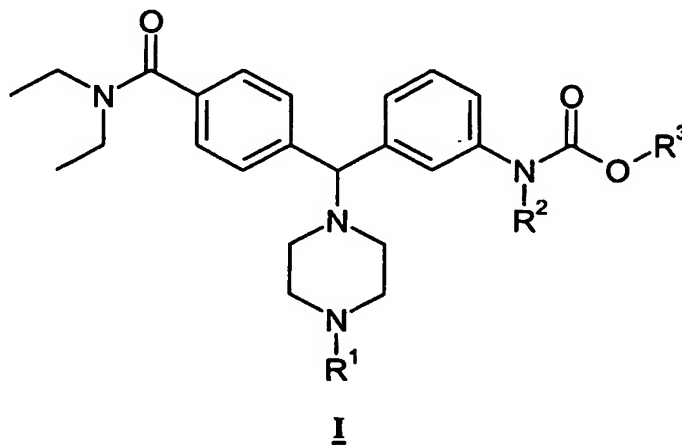


What is claimed is :

1. A compound of formula I, a pharmaceutically acceptable salt thereof, diastereoisomers, enantiomers, or mixtures thereof:



wherein

R^1 is selected from -H, C_{6-10} aryl, C_{2-6} heteroaryl, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl, wherein said C_{6-10} aryl, C_{2-6} heteroaryl, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl are optionally substituted with one or more groups selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl;

R^2 is selected from -H, C_{1-6} alkyl and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl; and

R^3 is selected from C_{1-6} alkyl and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl.

2. A compound according to claim 1, wherein

R^1 is $-CH_2-R^4$, wherein R^4 is selected from phenyl; pyridyl; thienyl; furyl; imidazolyl; triazolyl; pyrrolyl; thiazolyl; and N-oxido-pyridyl, wherein said phenyl; pyridyl; thienyl; furyl; imidazolyl; triazolyl; pyrrolyl; thiazolyl; and N-oxido-pyridyl are optionally substituted with one or more groups selected from C_{1-6} alkyl, halogenated C_{1-6} alkyl, $-NO_2$, $-CF_3$, C_{1-6} alkoxy, chloro, fluoro, bromo, and iodo;

R^2 is selected from $-H$ and C_{1-3} alkyl; and

R^3 is selected from C_{1-6} alkyl, and C_{3-6} cycloalkyl.

10

3. A compound according to claim 2,

wherein R^4 is selected from phenyl; pyridyl; thienyl; furyl; imidazolyl; pyrrolyl and thiazolyl;

R^2 is selected from $-H$ and methyl; and

15

R^3 is selected from methyl, ethyl, propyl and isopropyl.

4. A compound according to claim 1, wherein

R^1 is $-H$;

R^2 is selected from $-H$ and C_{1-3} alkyl; and

20

R^3 is selected from C_{1-6} alkyl, and C_{3-6} cycloalkyl.

5. A compound according to claim 1, wherein the compound is selected from:

25

Methyl 3-[(4-[(diethylamino)carbonyl]phenyl)(4-benzyl-piperazin-1-yl)methyl]phenylcarbamate;

Methyl-3-{ {4-[(diethylamino)carbonyl]phenyl} [4-(thien-2-ylmethyl)piperazin-1-yl]methyl} phenylcarbamate;

30

Methyl 3-{ {4-[(diethylamino)carbonyl]phenyl} [4-(thien-3-ylmethyl)piperazin-1-yl]methyl} phenylcarbamate;

Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(2-furylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

5 Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(3-furylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(1H-imidazol-2-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

10 Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(pyridin-2-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(pyridin-4-yl-methyl)piperazin-1-yl]methyl}phenylcarbamate;

15 Methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[4-(1,3-thiazol-2-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

20 [3-[[4-[(diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]phenyl]-carbamic acid methyl ester;

[3-[(S)-[4-[(diethylamino)carbonyl]phenyl][4-(3-pyridinylmethyl)-1-piperazinyl]methyl]phenyl]- carbamic acid, methyl ester;

25 [3-[(S)-[4-[(diethylamino)carbonyl]phenyl][4-(2-thiazolylmethyl)-1-piperazinyl]methyl]phenyl]- carbamic acid, methyl ester;

Methyl 3-((R)-{4-[(diethylamino)carbonyl]phenyl}[4-(1,3-thiazol-4-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

30 Methyl 3-((S)-{4-[(diethylamino)carbonyl]phenyl}[4-(1,3-thiazol-4-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

Methyl 3- $\{ (R) \}$ -4- $\{ [(diethylamino)carbonyl]phenyl \}$ [4-(1,3-thiazol-5-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

5 Methyl 3- $\{ (S) \}$ -4- $\{ [(diethylamino)carbonyl]phenyl \}$ [4-(1,3-thiazol-5-ylmethyl)piperazin-1-yl]methyl}phenylcarbamate;

[3- $\{ [4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl \}$ phenyl]- carbamic acid, methyl ester;

10 enantiomers thereof; and pharmaceutically acceptable salts thereof.

6. A compound according to any one of claims 1-5 for use as a medicament.

7. The use of a compound according to any one of claims 1-5 in the manufacture
15 of a medicament for the therapy of pain, anxiety or functional gastrointestinal disorders.

8. A pharmaceutical composition comprising a compound according to any one of claims 1-5 and a pharmaceutically acceptable carrier.
20

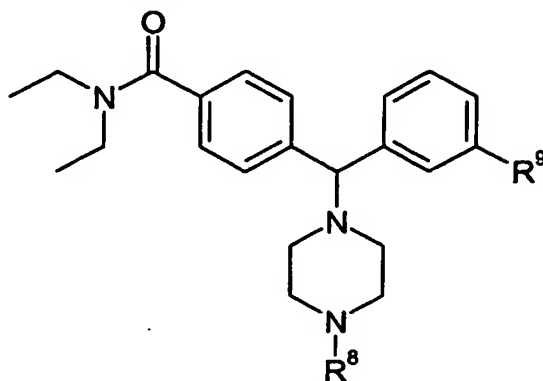
9. A method for the therapy of pain in a warm-blooded animal, comprising: administering to said animal in need of such therapy a therapeutically effective amount of a compound according to any one of claims 1-5.

25 10. A method for the therapy of functional gastrointestinal disorders in a warm-blooded animal, comprising: administering to said animal in need of such therapy a therapeutically effective amount of a compound according to any one of claims 1-5.

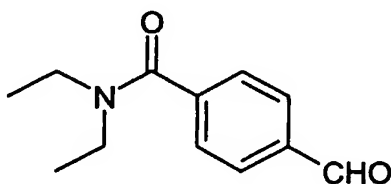
11. A method for the therapy of anxiety in a warm-blooded animal, comprising:
30 administering to said animal in need of such therapy a therapeutically effective amount of a compound according to any one of claims 1-5.

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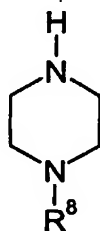
12. A process for preparing a compound of formula II, comprising:

II

5 a) reacting a compound of formula III:

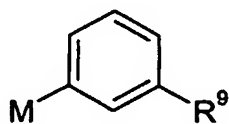
III

with a compound of formula IV

IV

10 in the presence of benzotriazole; and

b) reacting a product formed in step a) with a compound of formula V to form the compound of formula II,

V

15 wherein

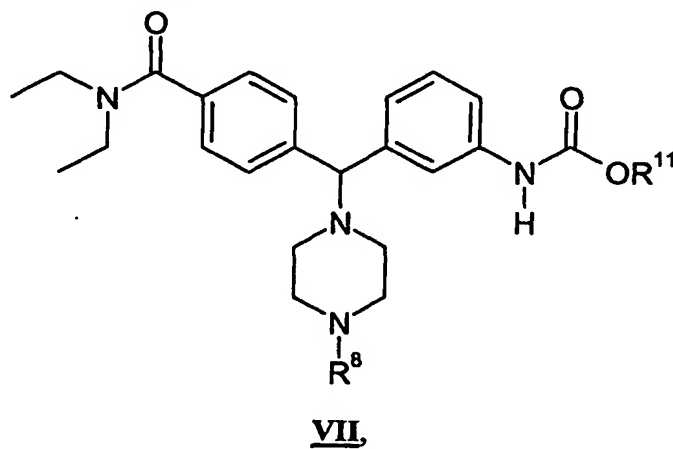
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R^8 is selected from C_{1-6} alkyl-O-C(=O)-, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl, wherein said C_{1-6} alkyl-O-C(=O)-, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl are optionally substituted with one or more groups selected from C_{1-6} alkyl, halogenated C_{1-6} alkyl, $-NO_2$, $-CF_3$, C_{1-6} alkoxy, chloro, fluoro, bromo, and iodo;

M is selected from Li, Na, K, $-ZnX^1$, and $-MgX^1$, wherein X^1 is a halogen; and

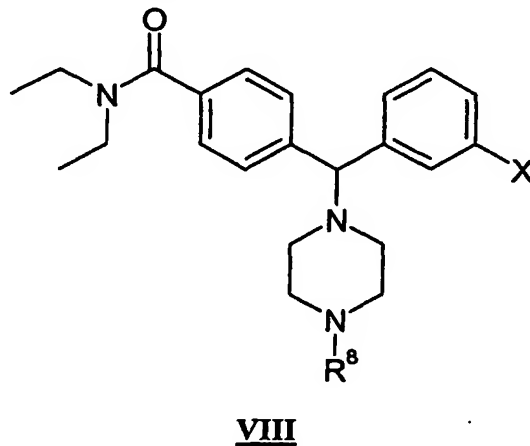
R^9 is selected from hydrogen, $-R$, $-NO_2$, $-OR$, $-Cl$, $-Br$, $-I$, $-F$, $-CF_3$, $-C(=O)R$, $-C(=O)OH$, $-NH_2$, $-SH$, $-NHR$, $-NR_2$, $-SR$, $-SO_3H$, $-SO_2R$, $-S(=O)R$, $-CN$, $-OH$, $-C(=O)OR$, $-C(=O)NR_2$, $-NRC(=O)R$, and $-NRC(=O)-OR$, wherein R is, independently, a hydrogen or C_{1-6} hydrocarbyl.

13. A process for preparing a compound of formula VII:



15 comprising:

reacting a compound of formula VIII



with a C_{1-6} alkylcarbamate to form the compound of formula VII,

wherein

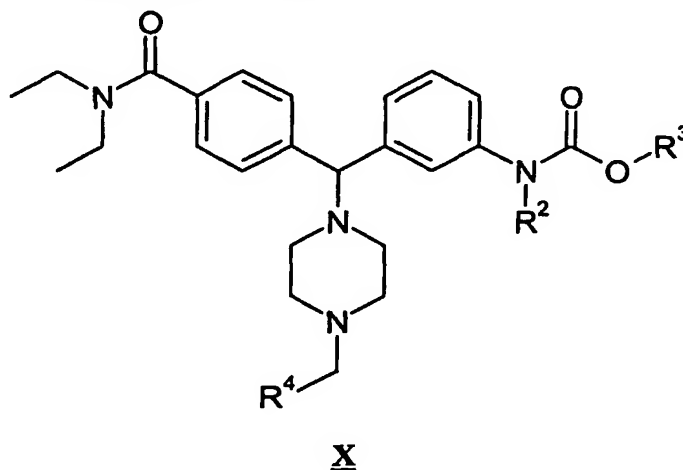
R^8 is selected from C_{1-6} alkyl-O-C(=O)-, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl, wherein said C_{1-6} alkyl-O-C(=O)-, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl are optionally substituted with one or more groups selected
 5 from -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6} alkyl;

X is selected from halogen, triflate, and sulfonamide; and

R^{11} is a C_{1-6} alkyl.

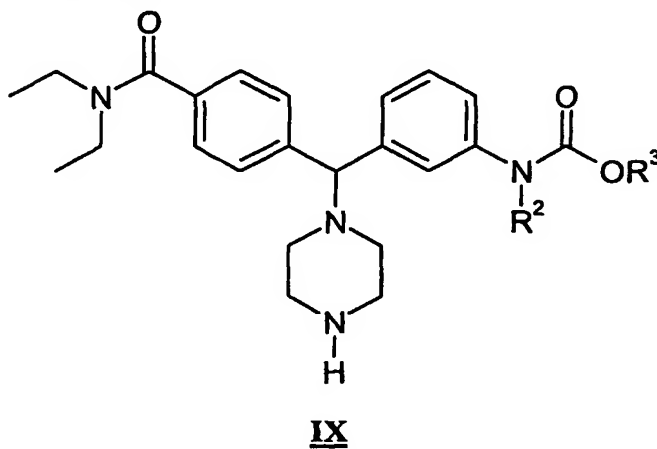
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14. A process for preparing a compound of formula X,



comprising:

15 reacting a compound of formula IX,



with R^4 -CHO to form the compound of formula X,

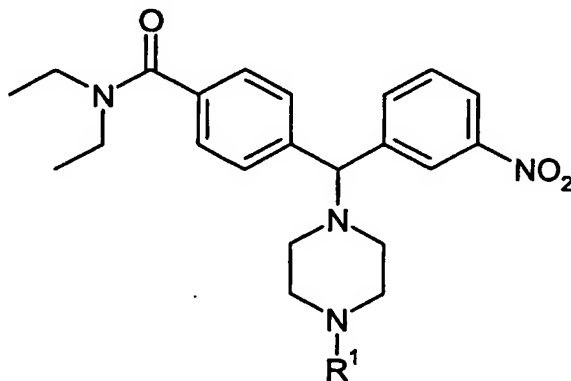
wherein

R^4 is selected from phenyl; pyridyl; thienyl; furyl; imidazolyl; triazolyl; pyrrolyl; thiazolyl; and N-oxido-pyridyl, wherein said phenyl; pyridyl; thienyl; furyl; imidazolyl; triazolyl; pyrrolyl; thiazolyl; and N-oxido-pyridyl are optionally substituted with one or more groups selected from C_{1-6} alkyl, halogenated C_{1-6} alkyl, $-NO_2$, $-CF_3$, C_{1-6} alkoxy, chloro, fluoro, bromo, and iodo;

R^2 is selected from $-H$, C_{1-6} alkyl and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from $-OR$, $-Cl$, $-Br$, $-I$, $-F$, $-CF_3$, $-C(=O)R$, $-C(=O)OH$, $-NH_2$, $-SH$, $-NHR$, $-NR_2$, $-SR$, $-SO_3H$, $-SO_2R$, $-S(=O)R$, $-CN$, $-OH$, $-C(=O)OR$, $-C(=O)NR_2$, $-NRC(=O)R$, and $-NRC(=O)-OR$, wherein R is, independently, a hydrogen or C_{1-6} alkyl; and

R^3 is selected from $-H$, C_{1-6} alkyl and C_{3-6} cycloalkyl, wherein said C_{1-6} alkyl and C_{3-6} cycloalkyl are optionally substituted with one or more groups selected from $-OR$, $-Cl$, $-Br$, $-I$, $-F$, $-CF_3$, $-C(=O)R$, $-C(=O)OH$, $-NH_2$, $-SH$, $-NHR$, $-NR_2$, $-SR$, $-SO_3H$, $-SO_2R$, $-S(=O)R$, $-CN$, $-OH$, $-C(=O)OR$, $-C(=O)NR_2$, $-NRC(=O)R$, and $-NRC(=O)-OR$, wherein R is, independently, a hydrogen or C_{1-6} alkyl.

15. A compound of formula XI, a pharmaceutically acceptable salt thereof, diastereomers, enantiomers, or mixtures thereof:



XI

wherein

R^1 is selected from $-H$, C_{6-10} aryl, C_{2-6} heteroaryl, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl, wherein said C_{6-10} aryl, C_{2-6} heteroaryl, C_{6-10} aryl- C_{1-4} alkyl, and C_{2-6} heteroaryl- C_{1-4} alkyl are optionally substituted with one or more groups

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selected from -R, -NO₂, -OR, -Cl, -Br, -I, -F, -CF₃, -C(=O)R, -C(=O)OH, -NH₂, -SH, -NHR, -NR₂, -SR, -SO₃H, -SO₂R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR₂, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C₁₋₆alkyl.